

AMENDMENTS TO THE CLAIMS

1 – 25. (Canceled)

26. (Previously Presented) A device according to claim 29, wherein the control unit and the dressing are integrated with each other.

27 – 28. (Canceled)

29. (Currently Amended) A device for treating damaged tissue, the device comprising:
a dressing having a treatment surface for applying to a treatment area of said damaged tissue;
a pair of electrodes affixed on said treatment surface of the dressing; and
a control unit for passing alternating current between the electrodes to the treatment area between via the electrodes and for constantly ~~and concurrently~~ varying the value of the amplitude of the alternating current and the frequency of the alternating current to electrically stimulate and repair said damaged tissue.

30. (Original) A device according to claim 29, wherein the alternating current is varied between 50 and 500 microamps.

31. (Previously Presented) A device according to claim 29, wherein the frequency of the alternating current is varied between 10 and 900 hertz.

32. (Previously Presented) A device according to claim 29, wherein the time period between each variation of amplitude is 0.1 s.

33. (Previously Presented) A device according to claim 29, wherein the alternating current has a ramp waveform.

34. (Withdrawn) A device according to claim 26, wherein the control unit is etched into a substrate.

35. (Previously Presented) A device according to claim 29, wherein the control unit comprises:

a housing; and
electronic circuitry in the housing connected to the pair of electrodes.

36. (Previously Presented) A device according to claim 35, wherein the electronic circuitry comprises memory storing at least one program for determining the amplitude, frequency and waveform of alternating current supplied to the electrodes.

37. (Previously Presented) A device according to claim 36, wherein the control unit further comprises an i/o port connected to the electronic circuitry, such that an external device can connect to the control unit via the i/o port and update the memory and control operation of the control unit.

38. (Previously Presented) A device according to claim 37, wherein the control unit further comprises a wireless transceiver connected to the electronic circuitry, such that an external device can wirelessly connect to the control unit via the i/o port and update the memory and control operation of the control unit.

39. (Previously Presented) A device according to claim 35, wherein the control unit comprises:

a pair of activation electrodes; and
a removable tab including a metallic strip connecting the activation electrodes,
wherein the electronic circuitry detects when a current can pass between the activation electrodes and only supplies current to the output electrodes when the tab is removed such that no current passes between the activation electrodes.

40 – 48. (Canceled)

49. (New) A device according to claim 29, wherein the dressing is adapted to be applied to a wound.

50. (New) A device according to claim 49, wherein the dressing is adapted to absorb exudate from the wound.

51. (New) A device according to claim 29, wherein the dressing comprises tissue gel that can be absorbed by the wound.

52. (New) A device according to claim 51, wherein the tissue gel comprises a hydropolymer that releases oxygen molecules when current flows through the tissue gel.